

Notice of Allowability

Application No.

10/659,757

Applicant(s)

ACHARYA ET AL.

Examiner

Kenneth Tang

Art Unit

2195

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11/9/05.
2. ☒ The allowed claim(s) is/are 1-26.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).


* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date <u>1/9/05</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |


MENG-AL HSIEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Robert W. Griffith (Reg. 48,956) on 1/9/05.

3. Please replace claims 1, 5, 6, 7, 25, and 26 as shown below:

1. A method for scheduling responses in a point-to-point communication system having k channels, the method comprising the steps of:

receiving at a central server a plurality of job requests;

determining an adaptive schedule for transmitting, via said k channels, data responsive to said job requests, wherein the servicing of a first job request via a first channel is interrupted, an unserved portion of said data is returned from a local channel server to said central server, and said unserved portion is subsequently serviced via a second channel so as to service a second job request via said first channel in accordance with an updated schedule; and

calculating a deadline for each of said plurality of job requests, wherein each such deadline is calculated based on a processing time corresponding to each said job request, a stretch value

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corresponding to the processing time, and an arrival time corresponding to each said job request, wherein said schedule for processing said job requests is adaptively determined such that each said job request is serviced via said channels within said deadline corresponding to each said job request.

5. The method of claim 1, wherein, in the step of calculating a deadline, the deadline, D_i , for each of said plurality of job requests is given by $D_i = S \times P_i + A_i$, where P_i is a processing time corresponding to each said job request, A_i is an arrival time corresponding to each said job request, and S is a stretch value.

6. The method of claim 1, wherein said processing time further comprises a value corresponding to the size of each said job request divided by a channel bandwidth.

7. The method of claim 1, further comprising the step of proposing said stretch value.

25. An apparatus for use in scheduling responses in a point-to-point communication system having k channels, the apparatus comprising:

a central server configured: (i) to receive a plurality of job requests; (ii) to determine an adaptive schedule for transmitting, via said k channels, data responsive to said job requests,

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wherein the servicing of a first job request via a first channel is interrupted, an unserviced portion of said data is returned from a local channel server to said central server, and said unserviced portion is subsequently serviced via a second channel so as to service a second job request via said first channel in accordance with an updated schedule; and (iii) to calculate a deadline for each of said plurality of job requests, wherein each such deadline is calculated based on a processing time corresponding to each said job request, a stretch value corresponding to the processing time, and an arrival time corresponding to each said job request, wherein said schedule for processing said job requests is adaptively determined such that each said job request is serviced via said channels within said deadline corresponding to each said job request.

26. An article of manufacture for storing one or more software programs for use in a central server for scheduling responses in a point-to-point communication system having k channels, wherein the one or more programs when executed implement the steps of:

determining an adaptive schedule for transmitting, via said k channels, data responsive to received job requests, wherein the servicing of a first job request via a first channel is interrupted, an unserviced portion of said data is returned from a local channel server to said central server, and said unserviced portion is subsequently serviced via a second channel so as to service a second job request via said first channel in accordance with an updated schedule; and

calculating a deadline for each of said plurality of job requests, wherein each such deadline is calculated based on a processing time corresponding to each said job request, a stretch value corresponding to the processing time, and an arrival time corresponding to each said job request,

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wherein said schedule for processing said job requests is adaptively determined such that each said job request is serviced via said channels within said deadline corresponding to each said job request.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth Tang whose telephone number is (571) 272-3772. The examiner can normally be reached on 8:30AM - 6:00PM, Every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kt
1/9/05


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